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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/493,741	01/28/2000	Michal Lebl	A-68851-1/DJB/RMS/DCF	2613

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EXAMINER

BEISNER, WILLIAM H

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/493,741

Applicant(s)

LEBL, MICHAL

Examiner

William H. Beisner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 39-41 and 43-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Genese et al.(US 3,712,535).

The reference of Genese et al. discloses a centrifuge device (See Figure 2) that includes a rotor (10) rotatable about an axis of rotation that holds reaction vessels (38) in a **fixed position tilted away from the axis of rotation** (See position A in Figure 2 and column 6, lines 28-49). The reaction vessels are communicated with a windage bowl (collection vessel) (40) with a drain opening (See column 4, lines 49-51). The rotor includes a liquid distribution system (42) and the centrifuge is controlled by computer (73). With respect to the claimed waste reservoir connected with a tube to the centrifuge, the reference discloses that the drainage port of the windage bowl (40) is connected via the external connection (tube) (204) to a catch bottle (waste reservoir) (See column 12, lines 63-68).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 27-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamai (JP 64-83153) in view of Genese et al.(US 3,712,535) and Guigan (US 4,412,973).

The reference of Tamai discloses an apparatus capable of being used for solid-phase synthesis that includes a centrifuge with a rotor (2) rotatable around an axis of rotation and includes at least one reaction vessel (4) at an angle with respect to said axis of rotation so that an open end of said at least one reaction vessel is not tilted toward said axis of rotation. Note a 90 deg. angle as shown in Figure 2 meets this specific claim language. The reaction vessel contains a solid phase (See the English language abstract) and includes a waste collection system (30).

Claims 27 and 28 first differ by reciting that the waste reservoir is connected to the bottom of the centrifuge and/or includes is connected with a tube to the centrifuge.

The reference of Genese et al. discloses that it is known in the art to communicate a collection chamber such as discharge channel (30) of the primary reference with a tube and waste container. The reference of Genese et al. discloses communicating the windage bowl (40) with a tube (204) and collection bottle (See column 12, lines 63-68).

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In view of this teaching, it would have been obvious to one of ordinary skill in the art to provide a tube and collection vessel in communication with the discharge channel (30) of the reference of Tamai for the known and expected result of externally collecting liquid discharged from the vessels during a decanting step.

While the reference of Tamai discloses a solid phase in the reaction vessel that may be free within the vessel, the reference differs from claims 27 and 28 because the reference does not positively recite that the solid phase "is secured" to the vessel.

The reference of Guigan discloses that it is known in the art to provide a solid phase surface within a reaction vessel of the centrifuge device wherein the solid phase is an unsecured bead or a coating deposited on the walls of the reaction vessel (See column 3, lines 49-62).

In view of this teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to secure the solid phase reactant of the primary reference as a coating on the vessel wall for the known and expected result of providing a means recognized in the art for maintaining the solid phase within the reaction vessel.

With respect to claims 35-37, the method of attachment of the solid phase would have been merely an obvious matter in design choice as suggested by the reference of Guigan.

With respect to claim 29, the rotor of Tamai includes a plurality of holders that position the vessels at an angle as required of claims 27 and 28.

With respect to claims 30 and 31, the reference of Tamai includes an integrated liquid distribution system (22).

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With respect to claim 32, the reference of Tamai discloses controller (32 or 33). If not, the reference of Genese et al. discloses that the use of controllers or computers is known and obvious for automation of the operation of the centrifuge device.

With respect to claims 33 and 38, the angle is fixed and not toward the axis of rotation during rotation.

With respect to claims 34, 39 and 42, while the reference of Tamai discloses holding a plurality of microtiter plates, the claims differ by reciting that the plates are held in a tilted position away from the axis of rotation of the rotor.

The reference of Genese et al. discloses that it is known in the art to decant a vessel in a centrifuge device using a negative tilt (See column 6, lines 28-47).

In view of this teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the holder of the primary reference so as to fix the vessels in an outward tilt for the known and expected result of ensuring the emptying of the wells (44) as is taught by the secondary reference and required of the primary reference of Tamai. A combination of tilt and/or speed would be variables recognized by one of ordinary skill in the art that would control decanting conditions.

With respect to claims 40 and 41 see the discussion of claims 27 and 28 above.

With respect to claims 43 and 44 see the discussion of claims 30 and 31 above.

With respect to claim 45 see the discussion of claim 32 above.

With respect to claims 46-49, see the discussion of claims 27, 28 and 35-37 above.

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6. Claims 27, 28, 30-36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guigan (US 4,412,973) in view of Genese et al.(US 3,712,535).

The reference of Guigan discloses an apparatus capable of being used for solid-phase synthesis that includes a centrifuge with a rotor (1) rotatable around an axis of rotation and includes at least one reaction vessel (2) at an angle with respect to said axis of rotation so that an open end (7) of said at least one reaction vessel is not tilted toward said axis of rotation. Note a 90 deg. angle as shown in Figure 2 meets this specific claim language. The reaction vessel contains a solid phase (3).

While the reference of Guigan discloses expelling liquids from opening (7) during use, the reference is silent as to a waste collection system.

The reference of Genese et al. discloses that it is known in the art to collect the waste expelled from a vessel in a centrifuge rotor. The reference of Genese et al. discloses communicating the windage bowl (40) with a tube (204) and collection bottle (See column 12, lines 63-68).

In view of this teaching, it would have been obvious to one of ordinary skill in the art to collect the waste liquid of the reference of Guigan using a windage bowl, a tube and collection vessel in communication with the discharge channel (7) of the reference of Guigan for the known and expected result of externally collecting liquid discharged from the vessels during an expelling step.

With respect to claims 30 and 31, the reference of Guigan includes an integrated liquid distribution system (4, 9).

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With respect to claim 32, the reference of Genese et al. discloses that the use of controllers or computers is known and obvious for automation of the operation of the centrifuge device.

With respect to claims 33 and 38, the angle is fixed and not toward the axis of rotation during rotation.

With respect to the manner in which the solid phase maintained within the vessel as recited in claims 35 and 36, the reference of Guigan discloses that it is known in the art to provide a solid phase surface within a reaction vessel of the centrifuge device wherein the solid phase is an unsecured bead or a coating deposited on the walls of the reaction vessel (See column 3, lines 49-62). As a result, the method of attachment of the solid phase would have been merely an obvious matter in design choice as suggested by the reference of Guigan.

Response to Arguments

7. Applicant's arguments, see pages 6-8, filed 25 Sept. 2003, with respect to the rejection(s) of claim(s) 27, 28 and 30-32 under 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the references of Tamai (JP 64-83153) and Guigan (US 4,412,973). Note applicant's comments linked with the amendments to the claims are persuasive to overcome the 35 USC 102 rejections of record.

8. Applicant's arguments, see pages 8-9, filed 25 Sept. 2003, with respect to the rejection(s) of claim(s) 29 under 103 have been fully considered and are persuasive. Therefore,

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the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the reference of Guigan (US 4,412,973). Applicant's comments linked with the amendments to the claims were persuasive to overcome the 35 USC 103 rejection using the reference of Tamai in view of Genese. However, the new ground of rejection in response to the amendment to the claims address the use of a solid-phase material and the capability of the device for being used for solid-phase synthesis.

9. Applicant's arguments filed 25 Sept. 2003 have been fully considered but they are not persuasive.

With respect to new claims 39-49, applicant argues that the prior art taken individually or combined, fails to disclose or suggest "a reaction vessel at a fixed angle tilted with respect to the axis of rotation, that is, immovably tilted such than an open end of the reaction vessel points away from the axis of rotation.

In response, the Examiner is of the position that the instant claim language of claim 39 does not define over the device of the reference of Genese et al. because while the reaction vessel is movable to different positions, the vessel is "at a fixed angle tilted with respect to said axis of rotation so that an open end of said at least one reaction vessel is pointed away from said axis of rotation" during the decanting step. The instant claim language does not preclude the device of Genese et al. wherein the vessel can be provided at different **fixed** positions relative to the axis of rotation of the rotor.

Conclusion

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10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Beisner whose telephone number is 571-272-1269. The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:40am to 4:10pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on 571-272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


William H. Beisner
Primary Examiner
Art Unit 1744

WHB